## RADIO ORDER CORPORATION

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September 14, 1995

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Mr. William F. Caton Acting Secretary Federal Communications Commission 1919 M Street, N.W. Washington, D.C. 20554

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Re: COMMENTS OF RADIO ORDER CORPORATION In the Matter of Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band; IB Docket No. 95-91, GEN Docket No. 90-357, RM No. 8610

Dear Mr. Caton:

Please find an original plus nine copies of COMMENTS
OF RADIO ORDER CORPORATION for filing in the above referenced matter.

Respectfully submitted,

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# Before the Federal Communications Commission Washington, D.C. 20554

In the Matter of	) IB Docket No. 95-91
	GEN Docket No. 90-357
	RM No. 8610
Establishment of Rules and	) PP-24
Policies for the Digital Audio	) PP-86
Radio Satellite Service in the 2310-2360 MHz Frequency Band	) PP-87

### COMMENTS OF RADIO ORDER CORPORATION

To: The Commission

Submitted by

David A. Reams President and General Counsel Radio Order Corporation P.O. Box 502 Perrysburg, Ohio 43552 (419) 389-8269

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#### i. Executive Summary

Perhaps as its primary market Digital Audio Radio Service (DARS) will create a new medium for record/compact disc (CD) labels and producers to sell CD's. For the first time the radio broadcast of a song will be in CD audio quality, thereby greatly enhancing the marketing value to record/CD labels of this new medium.

playing, uninterrupted sets of songs. So that DARS radio listeners can order or inquire about CD's containing songs aired there is a vital need to inform listeners during or immediately after each song airing of song title, artist, record/CD label and, optionally, CD release date information. In addition, the manner of informing DARS radio listeners must be voice delivery so that automobile drivers listening to the radio, the primary market for DARS, can simply and safely receive such song information.

A song-related voice messaging service designed to provide DARS radio listeners such song information is described herein. Classifying such service as "ancillary" pursuant to the Commission's Notice of Proposed Rulemaking in the above captioned matter may limit the time and technical conditions under which such song-related voice messaging service is provided. In contrast, classifying such service as "primary" program audio service would permit critical song information to be provided on an ongoing basis with respect to each song aired.

Such song-related voice messaging service meets the Commission's proposed DARS definition.

Specifically, such song-related voice messaging service meets the four major elements of the proposed DARS definition: 1) CD quality audio; 2) audio programming; 3) digitally transmitted and 4) direct to receiver.

Further, a primary service classification for such song-related voice messaging service would not result in a de facto reallocation of the Commission's DARS allocation. Indeed, while the Commission was considering the DARS allocation, a system using program-related voice messaging as an integral part of digital audio broadcasting (DAB) program audio service was proposed for Eureka. Thus, combining voice messaging with program audio in one integrated DAB service was contemplated by the United States and other countries for which Eureka served as an initial model while considering and allocating DAB radio frequency.

Radio Order Corporation requests the Commission classify song-related voice messaging service provided by DARS licensees, specifically as described herein, as primary service. Alternatively, should the Commission deem such song-related voice messaging service provided by DARS licensees as an ancillary service, Radio Order Corporation requests such service be permitted to be provided on a permanent ancillary basis.

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#### COMMENTS OF RADIO ORDER CORPORATION

#### To: The Commission

Radio Order Corporation (hereinafter termed "ROC"), by counsel and pursuant to the Commission's Notice of Proposed Rulemaking in the above captioned matter (hereinafter termed "NPRM"), hereby comments on the issue of ancillary service raised in the NPRM.

#### I. ROC's Interest In This Matter

ROC is currently designing and developing a tuner to receive both DARS program audio and certain digitally encoded voice signals (hereinafter termed "DARS tuner"). Such digitally encoded voice signals are associated with or related to, among other program audio, song program audio

aired over DARS.\* The DARS tuner apparatus and related methods of encoding, transmitting, decoding and processing digitally encoded voice signals are claimed in a pending United States patent application owned by the undersigned.\*\*

In its DARS voice messaging system ROC focuses on song program audio because DARS program audio will initially likely consist of entirely songs. Long-playing song sets in CD quality audio will lead to extensive, uninterrupted periods of listening enjoyment for DARS radio listeners. Due to such long-playing sets, however, there will be no

\* ROC's DARS system is designed to provide several other program-related voice messaging services to DARS radio listeners. One such service enables DARS radio listeners to request and receive voice messages and information concerning program material (other than songs) aired or an advertised product or service. Program-related information that may be requested includes information on ordering copies of program material, program response telephone number information, product/service price or availability information, promotional information or local retail outlet information.

In addition, ROC's DARS system may provide Emergency Alert System (EAS) messages, optionally in the message originator's voice pitch and other acoustical parameters, to one or more geographically affected communities located within the DARS service area (see 47 CFR Part 11 for EAS Rules and Regulations). The system may also provide weather, traffic or other information of local interest to one or more communities within the DARS service area.

\*\* In ROC's DARS system digitally encoded voice signals received and stored by the DARS tuner are reproduced via a speech synthesizer built into the DARS tuner. A program audio listener a) is visually alerted (such as via LED or LCD display) that a voice message is being stored in the DARS tuner and b) depresses a pushbutton to i) mute or attenuate the program audio and ii) activate speech synthesizer audible reproduction of the digitally encoded voice signals stored in the DARS tuner.

opportunity to announce or inform listeners "on air" of song title, artist, record/CD label and, optionally, CD release date information (hereinafter termed "song information") for several songs in a row, which will greatly frustrate a large percentage of listeners who enjoy songs aired in DARS program audio.\*

DARS radio listeners will need a means to timely and safely receive the song information and record/CD labels will need a means to provide the song information to DARS radio listeners. In ROC's DARS system digitally encoded voice signals transmitted with song program audio are representative of the song information to enable those DARS radio listeners interested in a song to activate voice delivery - in the song artist's voice pitch and other acoustical parameters.

Timely receipt of the song information would be during or immediately after the airing of a song of interest.

Real time (timely) voice messaging capability is made possible by DARS digital data transmission means.

Conventional AM/FM broadcast radio data transmission facilities, lacking such digital data transmission means, transmit encoded voice signals too slow for real time voice messaging (resulting in "slow voice" messaging).

<sup>\*</sup> See L.A. Rovira, et al, Patent No. 5,406,558 for discussion of how a lack of such song information with respect to songs played in cable radio program audio frustrates cable radio listeners

Voice messaging is preferred over text messaging the song information because the primary market for DARS will be individuals driving automobiles and listening to DARS program audio. Text display of message information is distracting and dangerous for car drivers, requiring the driver to pull over to the side of the road to safely read the information displayed. In contrast, voice messaging is simple and safe for car drivers.

ROC's interest (and request) in this matter is that, pursuant to the NPRM,

DARS licensee transmission of digitally encoded voice signals with associated song program audio be classified as primary service or, alternatively, permanent ancillary service.

II. Song-Related Voice Messaging Service Provided By DARS Licensees Should Be Classified As Primary Service.

Song-related voice messaging service provided by DARS licensees should clearly be classified as a primary or coprimary service under the Commission's proposed DARS definition and the criteria established in <u>United States</u>

<u>Satellite Broadcasting</u>, <u>Inc.</u>, 1 FCC Rcd 977 (1986).

A. Song-Related Voice Messaging Service Meets Proposed DARS Definition.

Song-related voice messaging service provided by DARS licensees meets the definition of DARS in the Commission's proposed Rule 47 CFR Section 25.201:

"[a] radiocommunication service in which compact
 disc quality audio programming is digitally
 transmitted by one or more space stations directly
 to fixed, mobile, and/or portable stations."

60 FR 35166 at 35168. ROC's song-related voice messaging
system meets all four major elements of this definition.

#### 1. CD Quality Audio

In ROC's voice messaging system identical audio encoding/compression and decoding/decompression respectively encodes/compresses program audio and digitally encoded voice signals at the DARS transmitter or the recording studio and decodes/decompresses program audio and digitally encoded voice signals at the DARS tuner.

Further, the DARS tuner audibly reproduces both program audio and digitally encoded voice signals in CD audio quality.

## 2. Audio Programming

DARS licensee song-related voice messaging is designed to be and in fact is program material. Indeed, voice delivering the song information in the pitch and other acoustical parameters of the song artist's voice should be entertaining program material in itself for fans of the song artist.

Further, classifying song-related voice messaging as

DARS program material is supported by the Commission's text

program (closed caption) requirement in 47 CFR Section

15.119 - in light of the Commission's definition of "cable service" and "other programming service" in respectively 47 USCS Sections 522(6) and (13). In 47 USCS Section 522(6) the Commission defines "cable service" to include:

"subscriber interaction, if any, which is required for the selection of ... video programming or other programming service."

In 47 USCS Section 522(13) the Commission defines "other programming service" to comprise:

"information that a cable operator makes available to all subscribers generally."

Just as text information is to be provided as optional program material to all television viewers under 47 CFR Section 15.119, song-related voice messaging information is to be provided as optional program material to all DARS radio listeners in ROC's song-related voice messaging system.

Likewise, the Commission's definition of a "subscription television program" in 47 CFR Section 73.641(b) is instructive:

"[a] television broadcast program intended to be received in intelligible form for a fee or charge."

In ROC's song-related voice messaging system digitally encoded voice signals are intended to be received and intelligibly reproduced as program audio at DARS tuners for DARS radio subscribers.

#### 3. Digitally Transmitted

In ROC's DARS system digitally encoded voice signals are transmitted via one or more DARS data or program audio channels.

#### 4. Direct To Receiver

Digitally encoded voice signals are transmitted directly to receiving tuners in ROC's DARS system.

B. Requested Primary Service Classification Will Not Result In A De Facto Reallocation.

A major concern of the Commission in considering primary non-video DBS service was "to ... prevent any semblance of <u>de facto</u> reallocation" by permitting non-video service to be provided as primary service by DBS licensees. (Emphasis added) <u>United States Satellite Broadcasting</u>, <u>Inc.</u>, supra at 979. The Commission's rationale underlying this major concern was that non-video service had not been contemplated as a primary service for DBS when DBS was being developed and allocated and that permitting non-video primary service would alter the fundamental nature of DBS.

In contrast, permitting transmission of digitally encoded voice signals with program audio songs as a primary DARS service would not alter the fundamental nature of the DARS allocation. DAB voice messaging service was contemplated and indeed proposed as a primary service with program audio (for the European Community's Eureka DAB system) while the Commission was considering the allocation

of DARS radio frequency. See <u>IEEE Transactions on</u>

<u>Broadcasting</u>, Vol. 39, No. 4, Dec. 1993, "Subband

Multipurpose Digital Audio Broadcasting for Mobile

Receivers" by X. Lin, L. Hanzo, R. Steele, W.T. Webb.

Therefore, classifying song-related voice messaging service provided by DARS licensees as primary DARS service would not result in a <u>de facto</u> reallocation of the DARS allocation.

A DAB system proposed in the EC for Eureka included encoding and transmitting digitally encoded (linear predictive coding or LPC encoded) voice signals as a primary part of DAB program audio service. See <a href="IEEE">IEEE</a>
Transactions on Broadcasting, supra. Being the first experimental DAB system, Eureka served as an initial model for the United States as the United States began developing DAB in 1990. The referenced DAB system proposed for Eureka was a matter of public knowledge\* and undoubtedly contemplated by the United States including the Commission while the Commission was considering the DARS allocation.

Transmission of digitally encoded voice signals with program audio may differ from DARS systems proposed to date

<sup>\*</sup> While this proposed Eureka system was one of several hundred proposed systems or projects being researched for Eureka at the time, the publication in <a href="IEEE Transactions">IEEE Transactions</a> on Broadcasting of an article concerning this system places it in the public domain. See <a href="Digital Radio Basics">Digital Radio Basics</a>, Skipp Pizzi, Telephony Div., Intertec Publishing Corp. (1992), p. 33-34.

by DARS applicants with the Commission. System design may even be able to be improved based on the proposed Eureka DAB system disclosed in the <u>IEEE Transactions on Broadcasting</u> article referenced above. Surely the Commission would permit DARS applicants to propose a DARS service transmitting digitally, LPC encoded voice signals for song-related voice messaging as a primary service based on such proposed Eureka system.

III. Should The Commission Deem Song-Related Voice Messaging Service As Ancillary, ROC Requests Such Service Receive Permanent Ancillary Status.

At para. 29 of the NPRM, the Commission requests comment on the definition of ancillary service. Ancillary service should be defined as "other than" DARS program audio-related service. In re Potential Uses of Certain Orbital Allocations by Operators in the Direct Broadcast Satellite Service, 4 FCC Rcd 6306 (1989) (ancillary service defined with respect to DBS as "other than those related to direct-to-home video entertainment and information.")

The Commission permitted non-video service to be provided as ancillary service "only for the purpose of fostering the provision of DBS service." <u>United States</u>

<u>Satellite Broadcasting</u>, <u>Inc.</u>, supra at 979. Such ancillary service designation was deemed "necessary in order to assure investors of the degree of risk involved in a DBS venture, and thereby secure the major financial commitments necessary to initiate DBS service." <u>United States</u>

Satellite Broadcasting, Inc., supra at 977.

Ancillary service was to be "phased out or reduced after a specified period of time to accommodate the introduction or expansion of DBS offerings." United States Satellite Broadcasting, Inc., supra at 979. Subsequent to its decision in United States Satellite Broadcasting, Inc., supra at 977 the Commission clarified that ancillary service not hampering the provision of primary DBS service did not need to be phased out and could be granted a "permanent" status. In re Potential Uses of Certain Orbital Allocations by Operators in the Direct Broadcast Satellite Service, supra (ancillary or non-conforming use "authorized only in the situation that DBS signals are already providing the same number of channels ... that would be provided in the absence of any such additional use").

Should the Commission deem song-related voice messaging service provided by DARS licensees as an ancillary service, such service should be permitted to be provided on a permanent ancillary basis. The Commission should permit such service to be offered by DARS licensees on a permanent ancillary basis because:

DARS licensee song-related voice messaging service would enable DARS radio listeners to use the DARS tuner for informative and entertaining messaging, thereby likely "fostering the provision of ...

[DARS] service." <u>United States Satellite</u>

<u>Broadcasting, Inc.</u>, supra;

DARS licensee song-related voice messaging service would provide an additional source of revenue for DARS licensees\* and thereby help "assure investors of the degree of risk involved in a ... [DARS] venture, and thereby secure the major financial commitments necessary to initiate ... [DARS] service." United States Satellite Broadcasting, Inc., supra;

DARS licensee song-related voice messaging service is to be ongoing with DARS program audio service, not to be "phased out or reduced after a specified period of time to accommodate the introduction or expansion of ... [DARS program audio] offerings."

<u>United States Satellite Broadcasting, Inc.</u>, supra

and

DARS licensee song-related voice messaging service would not hamper the provision of primary DARS

<sup>\*</sup> This revenue source may be from record/CD labels or local CD retail stores seeking to promote the sale of CD's containing songs aired by providing vital purchase information concerning the song artist, song title, record/CD label and, optionally, CD release date (in digitally encoded voice signals transmitted with associated song program audio). Financial disclosure, if required by the Commission pursuant to the NPRM and the Commission's application of 47 USCS Sections 317(a)(1) or 508 to DARS, would be provided in song-related voice messaging.

service and thus would not need to be phased out but rather should be granted a "permanent" status.

In re Potential Uses of Certain Orbital Allocations by Operators in the Direct Broadcast Satellite

Service, supra.

#### IV. Conclusion

In conclusion, ROC requests the Commission classify song-related voice messaging service provided by DARS licensees, specifically as described herein, as primary service. Alternatively, should the Commission deem such song-related voice messaging service provided by DARS licensees as an ancillary service, ROC requests such service be permitted to be provided on a permanent ancillary basis.

Respectfully submitted,

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